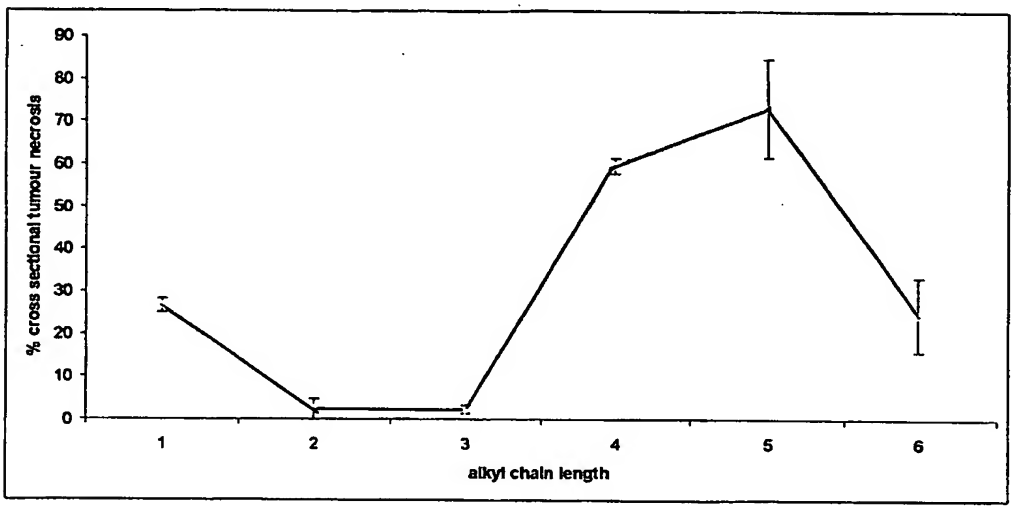
Figure 1

Symmetrical phenothiazinium salts: *in vivo* activity at 1h

Figure shows % cross sectional tumour necrosis at 72h post-PDT. All drugs were administered i.v. at a dose of 16.7μmol/kg. At 1h post drug administration light (60J/cm^2, 50mW/cm^2) was administered superficially.



Symmetrical phenothiazinium salt	Alkyl chain length	Vehicle	Wavelenght (nm ± 15)	%area	s.e.m
Methyl	1	Phys. saline	685	26.70	1.60
Ethyl	2	Phys. saline	630	2.38	2.38
Propyl	3	2%DMSO/H2O	630	2.27	0.99
Butyl	4	2%DMSO/H2O	660	59.74	1.78
Pentyl	5	2%DMSO/H2O	685	73.31	11.57
Hexyl	6	2%DMSO/H2O	660	24.71	8.74

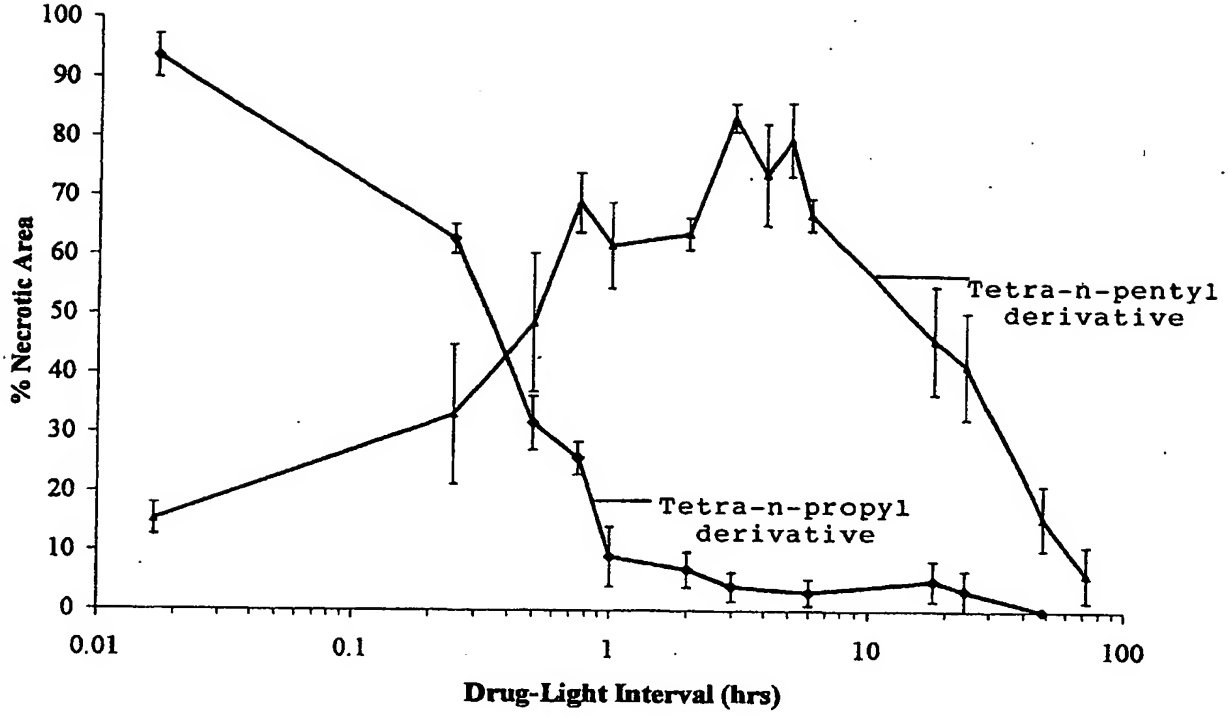


Figure 2: Area of tumour necrosis (expressed as a % total section area) 72 hrs after PDT with tetra-n-propyl and tetra-n-pentyl derivative (16.7μmolkg^{-1}, 660nm light @ 50mWcm^{-2}, 60Jcm^{-2}). Data points represent mean + SEM (n=6, each reading measured in triplicate).

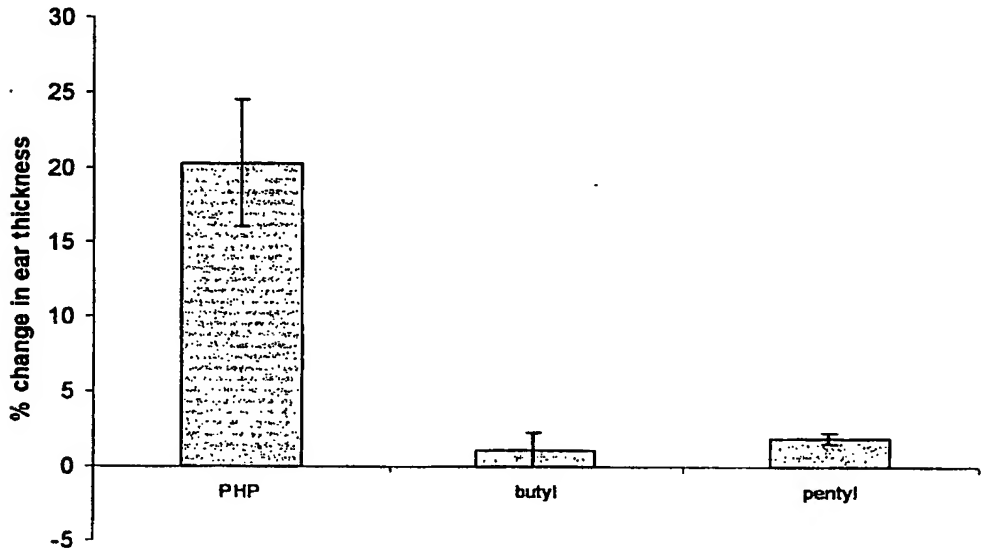
Figure 3

Skin photosensitivity- murine ear swelling response

CBA/Gy mice were injected with sensitiser at 16.7 μmol/kg. At 24h post drug injection ears were exposed to broad band white light from a xenon arc lamp (25J/cm^2, 30mW/cm^2). % Change in ear thickness was measured as :

(ear thickness at 24h post illumination - ear thickness pre-illumination) / ear thickness pre-illumination x 100

Increased % change in ear thickness measures increased skin photosensitivity.



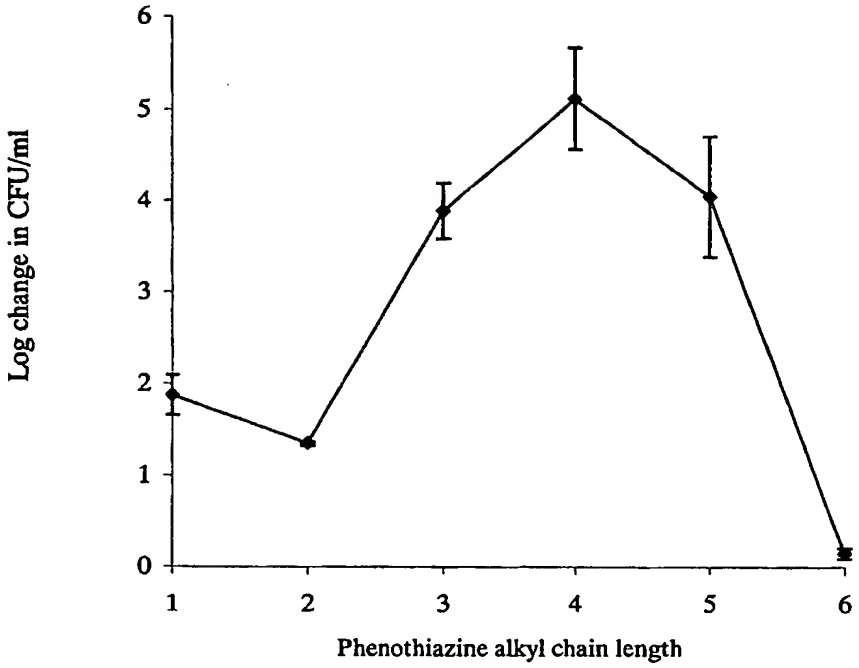


Figure 4 Log change in CFU/ml of *E.coli* incubated for 30 minutes with 10μM phenothiazine and illuminated for 60 minutes at 1.3mW/cm^{-2}

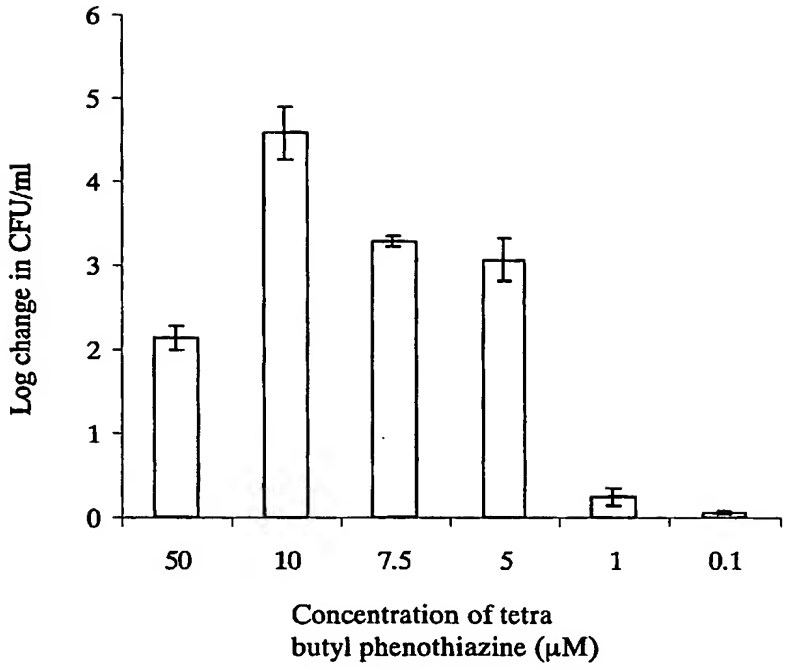


Figure 5 Log change in CFU/ml of *E.coli* incubated for 30 minutes with different concentrations of tetra butyl phenothiazine and illuminated for 15 minutes at 1.3mW/cm^{-2}

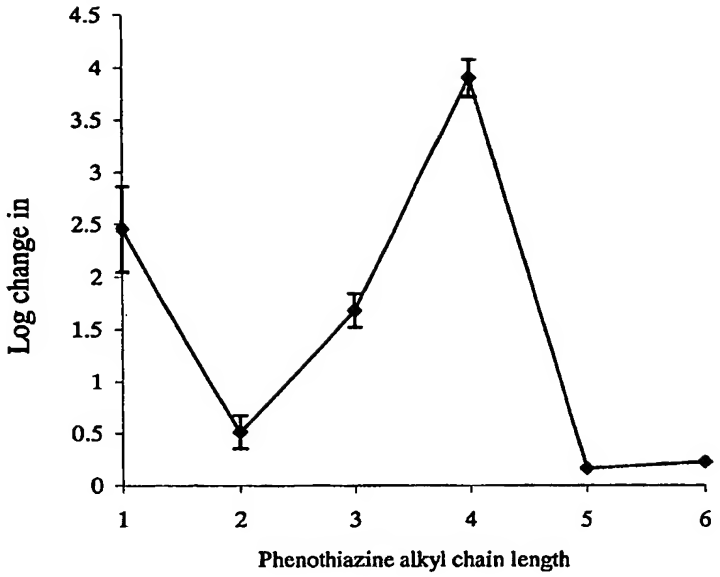


Figure 6 Log change in CFU/ml of *E.coli* in the stationary phase of growth following incubation for 30 minutes with 10μM phenothiazine and illuminated for 60 minutes at 1.3mWcm^{-2}

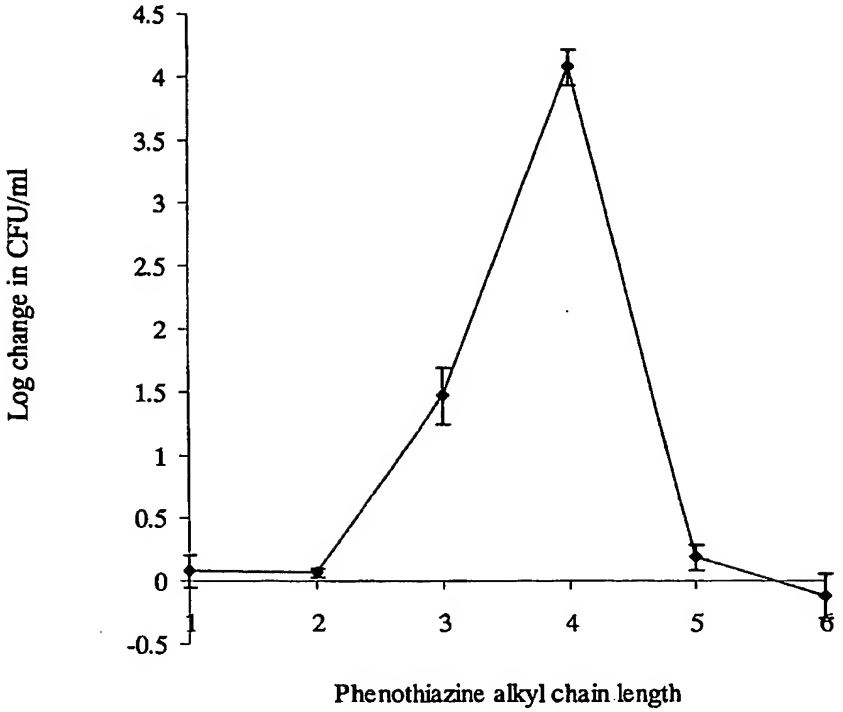


Figure 7 Log change in CFU/ml of *E.coli* resuspended in nutrient media. Cell were incubated for 30 minutes with 10μM phenothiazine and illuminated for 60 minutes at 1.3mW/cm^{-2}

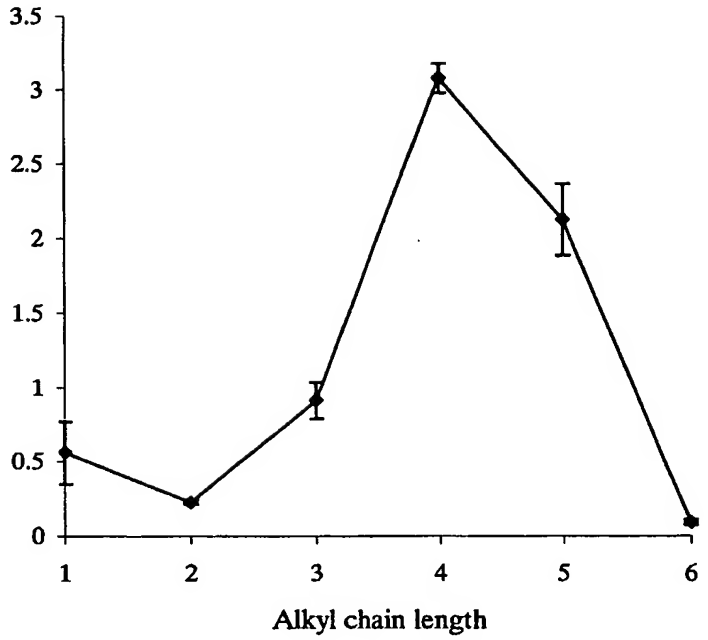


Figure 8 Log change in CFU/ml of *E.coli* following incubation with 10μM phenothiazine for 30 minutes. Illumination was with laser light (664nm) for 4 minutes at 0.1W

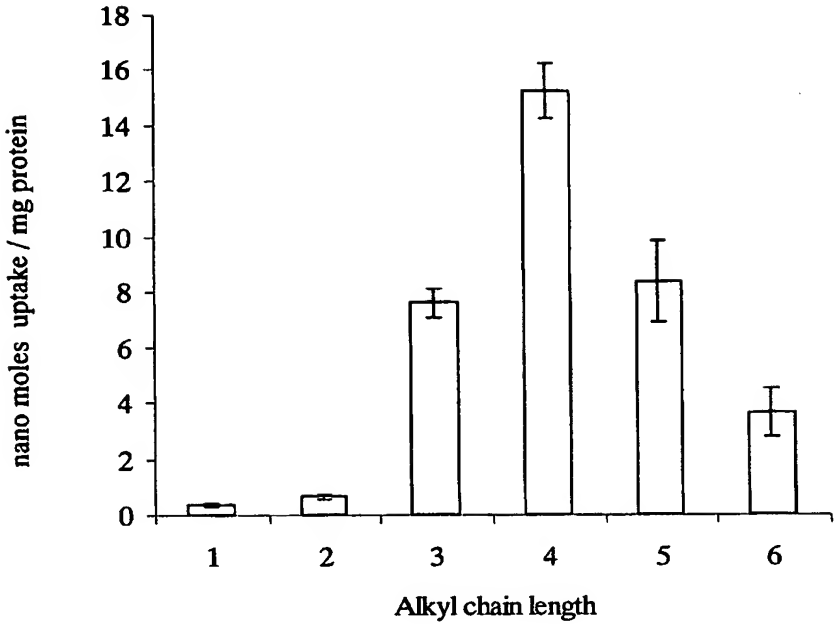


Figure 9 Uptake of 10μM phenothiazine into *E.coli* cells following a 30 minute incubation. Cells were washed twice in 0.1M pH7.0 potassium phosphate buffer to remove extra-cellular or loosely bound sensitiser.

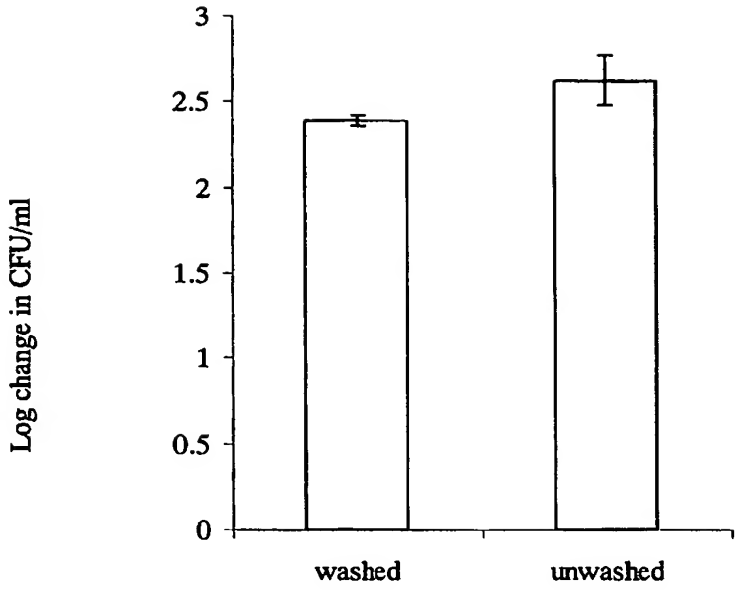


Figure 10 Log change in CFU/ml of *E.coli* cells incubated with 10μM tetra butyl phenothiazine. Cells were washed twice with 0.1M pH7 potassium phosphate buffer. Illumination used laser light (664nm) at 0.1W for 4 minutes.

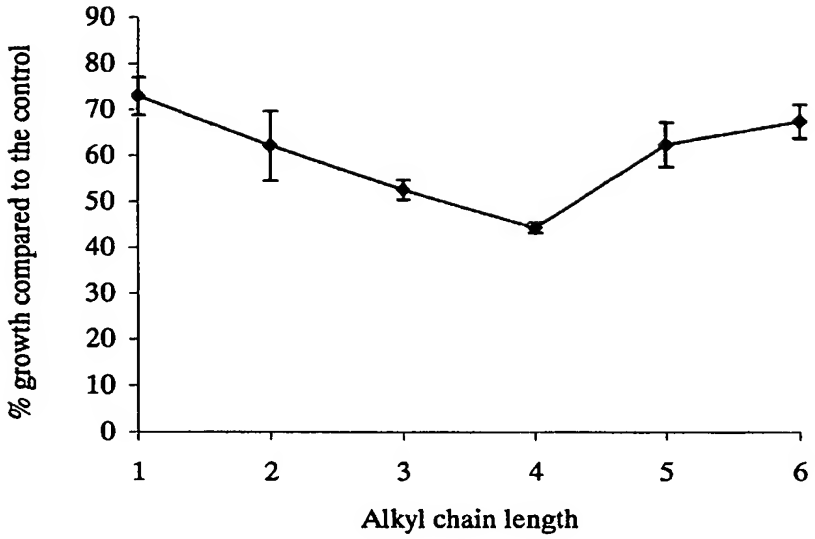


Figure 11 Percentage growth of a culture of an *E.coli* culture as compared to a control when 10μM phenothiazine was included in the growth media. Incubation was carried out in the dark at 37°C for 6 hours. Measurements based on apparent turbidity at 550nm.

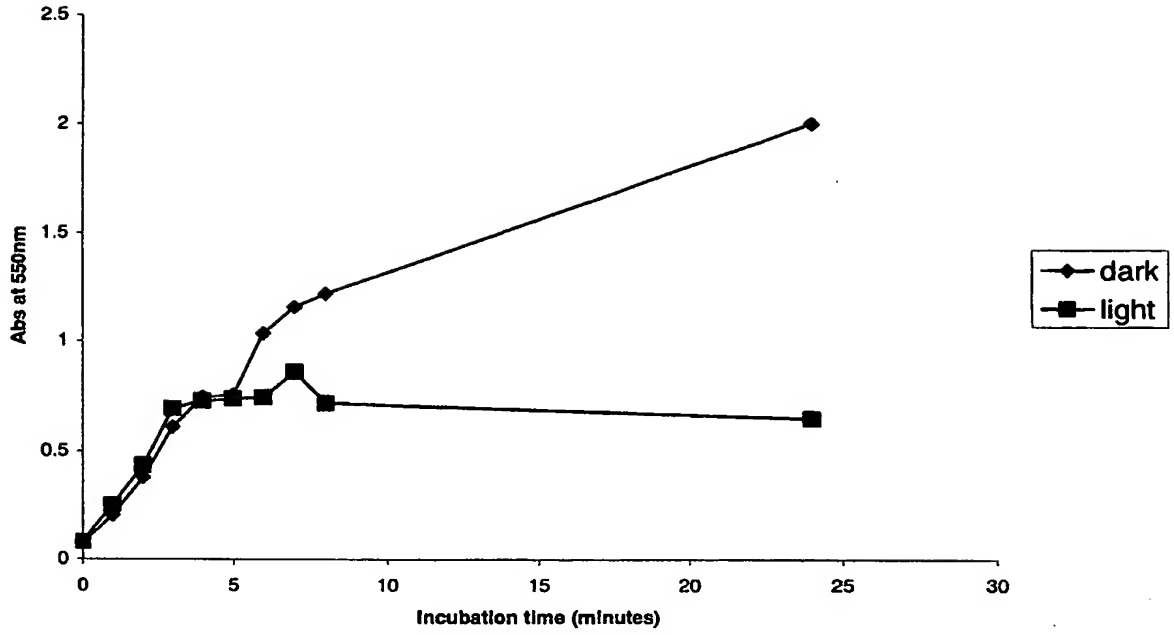


Figure 12 Change in absorbance of an *E.coli* culture grown in the presence of 10μM tetra butyl phenothiazine in the light and in the dark

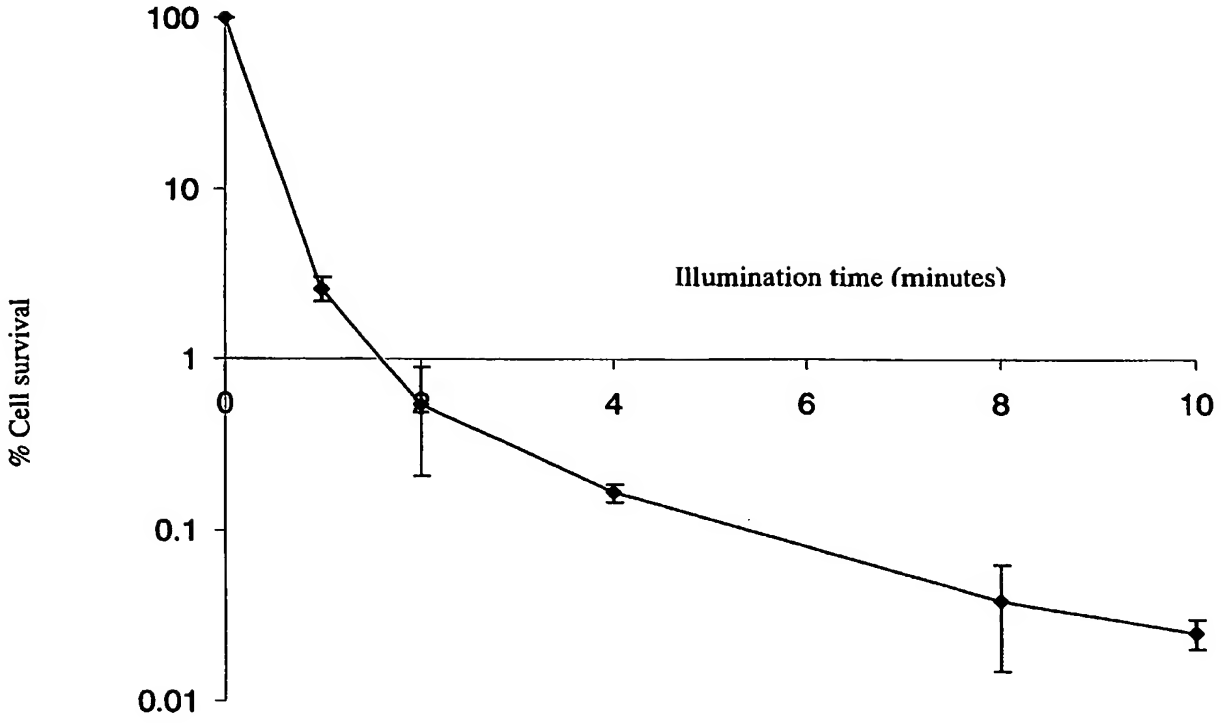


Figure 13 Percentage cell survival of *P.aeruginosa* following incubation with 10μM tetra butyl phenothiazine. Illumination was with laser light (664nm) at 0.1 W.

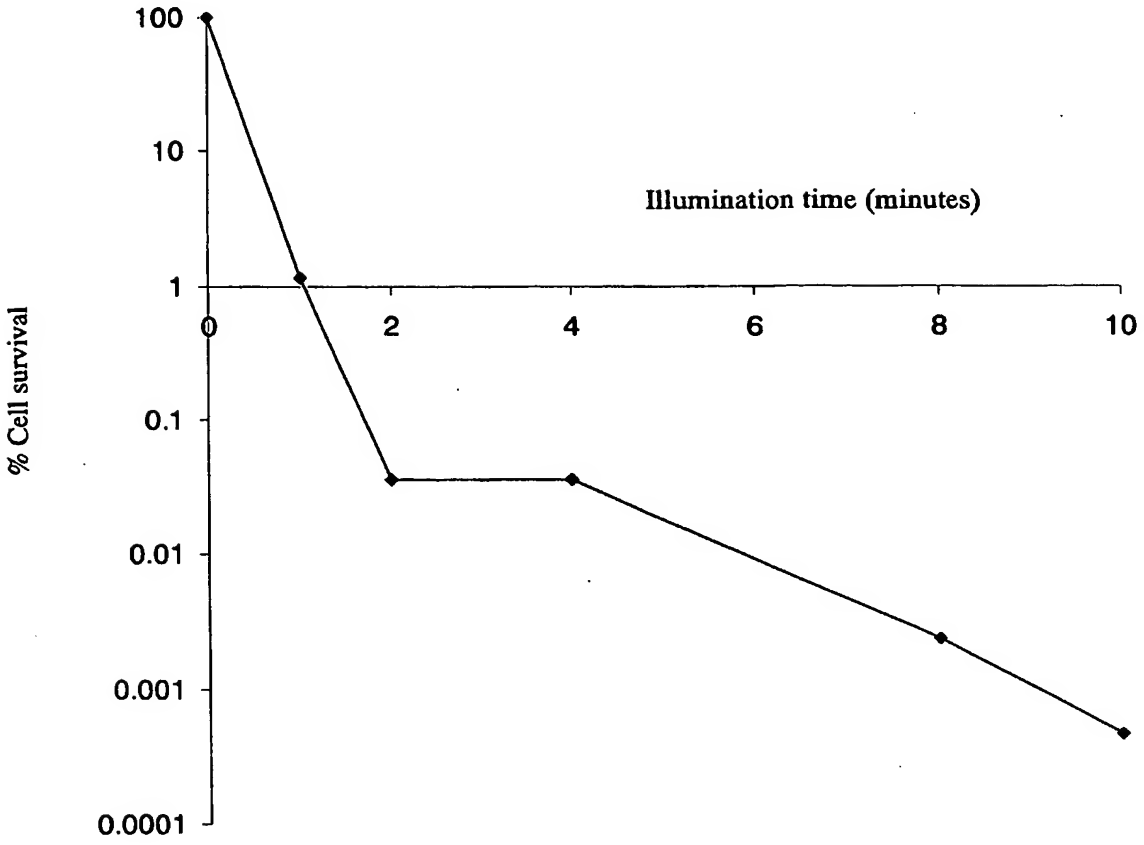


Figure 14 Percentage cell survival of *S.aureus* following incubation with 10μM tetra butyl phenothiazine. Illumination was with laser light (664nm) at 0.1 W.

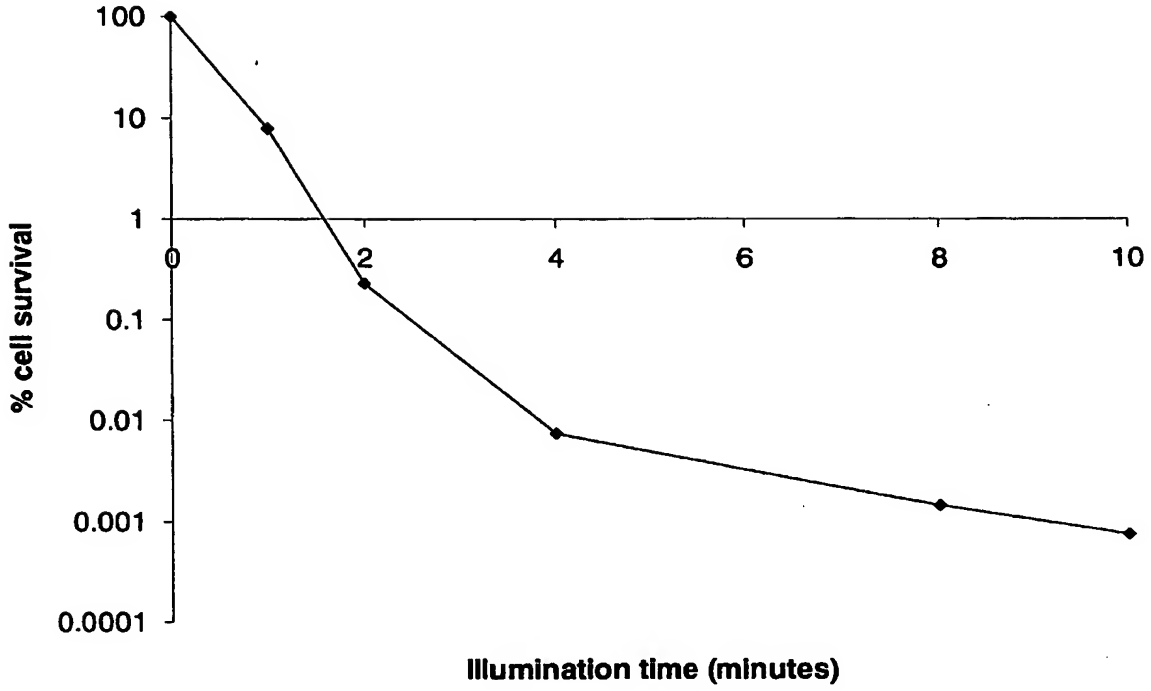


Figure 15 Percentage cell survival of MRSA following incubation with 10μM tetra butyl phenothiazine. Illumination was with laser light (664nm) at 0.1W

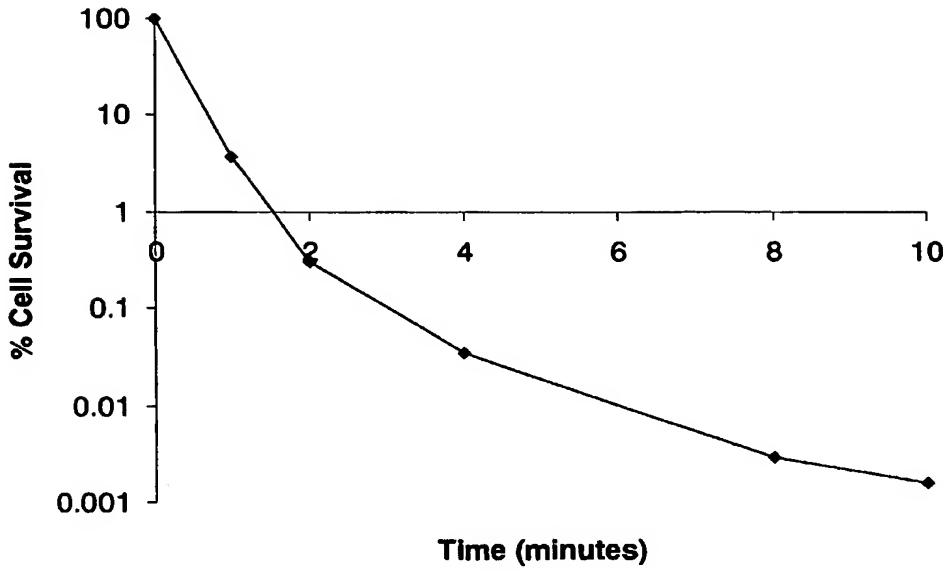


Figure 16 Percentage cell survival of *C.albicans* following incubation with 10μM tetra butyl phenothiazine. Illumination was with laser light (664nm) at 0.1W

Figure 17
Protocol:
Drug applied topically, dose = 5.79 μg (20μl at 0.5mM)
Applied light dose = 25J/cm^2 (30mW/cm^2 for 831sec)

1	PHP (i.v.) 8.35 μmol/kg 24h drug to light interval (solar simulator)
2	PHP(i.v.) 8.35 μmol/kg 2wk drug to light interval (solar simulator)
3	Butyl phenothiazinium drug only for 30min
4	24h ROOM LIGHT + Butyl phenothiazinium
5	24h ROOM LIGHT
6	24h DARK + Butyl phenothiazinium
7	24h DARK
8	Butyl phenothiazinium 30min drug to light interval (660±15nm)
9	Butyl phenothiazinium 30min drug to light interval (solar simulator)
10	Butyl phenothiazinium 24h drug to light interval (solar simulator)
11	Butyl phenothiazinium 7 days drug to light interval (solar simulator)
12	Butyl phenothiazinium 14 days drug to light interval (solar simulator)